

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Paragraph beginning at line 25 of page ⁵/~~7~~ has been amended as follows:

The control unit 14 is in fact normally connected to a plurality of sensors (~~not shown~~)¹⁶ that provide it with different variables INF related to the operation of the engine 15. Among other parameters, the control unit 14 will have information or data about the drive torque value, engine rpm, engine temperature, and whether the driver of the vehicle is speeding up. In addition, the control unit 14 will monitor the load applied to the electric system.

In the Claims:

Please cancel claims 9 and 10 and amend claims 1, 4, 6, and 11 to read as follows:

~~Claims 9 and 10 have been canceled.~~

Claims 1, 4, 6, and 11 have been amended as follows:

1. (Amended) A loop-type voltage regulating device, particularly for regulating a voltage of an automotive electric system, including at least one thermal engine, a voltage regulator and an alternator operative to deliver a system-regulated voltage signal to and receive a regulation signal from the voltage regulator, comprising: a control unit ~~within the regulating loop, said unit connected between said thermal engine and said voltage regulator and adapted to receive a regulated voltage signal and at least one engine operation signal pertaining to one from among engine torque value, engine rpm, and engine temperature, and in response thereto to supply said voltage regulator with a signal corresponding to the engine operation for regulating the voltage delivered from the alternator.~~

4. (Amended) The voltage regulating device of Claim 3, wherein said control unit has at least a second terminal connected to said alternator to receive the system ~~regulated voltage~~regulated voltage signal.

6. (Amended) The voltage regulating device of Claim 5, wherein the control unit is configured to:

process the incoming variables ~~at a fast rate to generate real-time information~~ about the state of engine; and

supply, as a phase signal, an accurate assessment of the operational state of the engine ~~in real-time; and~~

~~predict any later changes of said state.~~

11. (Amended) A method of loop regulating a voltage, in particular a voltage of an automotive electric system, comprising:

detecting variables related to the operation of a thermal engine by having a control unit connected to the engine, the variables comprising at least one from among engine torque, engine temperature, and engine rpm;

real-time processing the variables detected by the control unit in order to assess the actual conditions of the thermal engine operation;

regulating a system voltage according to the engine conditions of operation using a voltage regulator connected in turn to an alternator of the thermal engine and without using a phase signal from the alternator.